

PHOTO: Jackpile Reclamation Project - Photo Taken August 2003



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## Pueblo of Laguna – Jackpile Mine



### JACKPILE URANIUM MINING and RECLAMATION 1953 – 2008

#### OVERVIEW

The Jackpile Uranium Mine is located near the village of Paguate on the Laguna Indian Reservation, approximately 50 miles west of Albuquerque NM, 8 miles north of Laguna, NM. The Reclamation project's objective: To reclaim and stabilize the site of the Jackpile Uranium Mine, once the world's largest open pit Uranium mine.

#### HISTORY – MINING

The mine was operated by Anaconda Mining Co. from 1953 to 1982. (29 years, three shifts, 24 hours a day, 650 employees) 400 million tons of rock handled. The mine yielded 25 million tons of uranium ore which was shipped to processing facilities in the Grants/ Milan area and other areas in the US.

#### TIMELINE OF EVENTS

The Jackpile Uranium mine was closed in 1982. The Final Environmental Impact Statement (FEIS) was completed in Oct 1986. The mine pre-dated the National Environmental Protection Act and therefore required an Environmental Impact Statement. Lack of Specific regulations pertaining to reclamation of uranium mines lead to the creation of Laguna setting its own regulations and requirements. These regulations and requirements are spelled out in the Record of Decision. The Record of Decision (ROD) was issued by the Department of the Interior in Dec. 1986. This Document was issued jointly by the BIA and the BLM.



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The decision factors identified in the ROD were, ensure human health and safety, reduce the release of radioactive elements, and ensure integrity of all existing cultural, religious and archaeological sites. Return the vegetative cover to a productive condition comparable to the surrounding area. Provide for additional land use by the Pueblo of Laguna. Eliminate the need for post-reclamation maintenance.

#### RECLAMATION

Reclamation work started with the creation of Laguna Construction Co. Inc. August, 1989 mobilization and training began. December, 1989 was the beginning of the heavy earthmoving operations. The original mine lease was for 7,868 acres. The disturbed area was 2,686 acres and the reclaimed area was 2700 plus acres.

Reclamation completion was December 1995. This was 6 years of reclamation work at a cost of over several million dollars. The volume of material moved during reclamation was 33,000,000 cubic yards of earth. Regulatory over site was done by the Dept. of Interior. (BIA and BLM)

The monitoring was to be a minimum of and not less than ten years. The long term monitoring began Jan. 1996 and ended Dec. 2006. (10 years of monitoring) The monitoring costs are still accruing. However, this cost is likely to continue as we monitor both ground and surface water; the monitoring of vegetation uptake; potential land subsidence; and the prevention of trespass animals and persons onto the mine site. The continued Operations and Maintenance is projected to continue into the future potentially costing hundreds of thousands of dollars per year.

#### LEGACY

The side effects of mining have been felt long after the closing of the mine and will be felt long into the future years. Surface and Ground water will continue to have traces of uranium from gross alpha to isotopic levels. Vegetation will need continued monitoring for elevated heavy metals and the uptake of uranium and its decay chain elements. Due to underground mining subsidence will be a long term concern and the risk of animals ingesting potentially toxic plants or water is also a long term concern. All of these issues are a part of every mine's legacy.

#### FUTURE

The Jackpile reclamation with all its successes still has a long road ahead. It will be a challenge; with increasing costs and continued monitoring; to keep the mine in compliance with the ROD and keep the Jackpile mine a sustainable productive resource. Not all goals were reached the first time around however reclaiming a uranium mine of this size is no easy task. Continued long term monitoring and good management of the lands may someday allow limited but productive use by the Pueblo of Laguna.

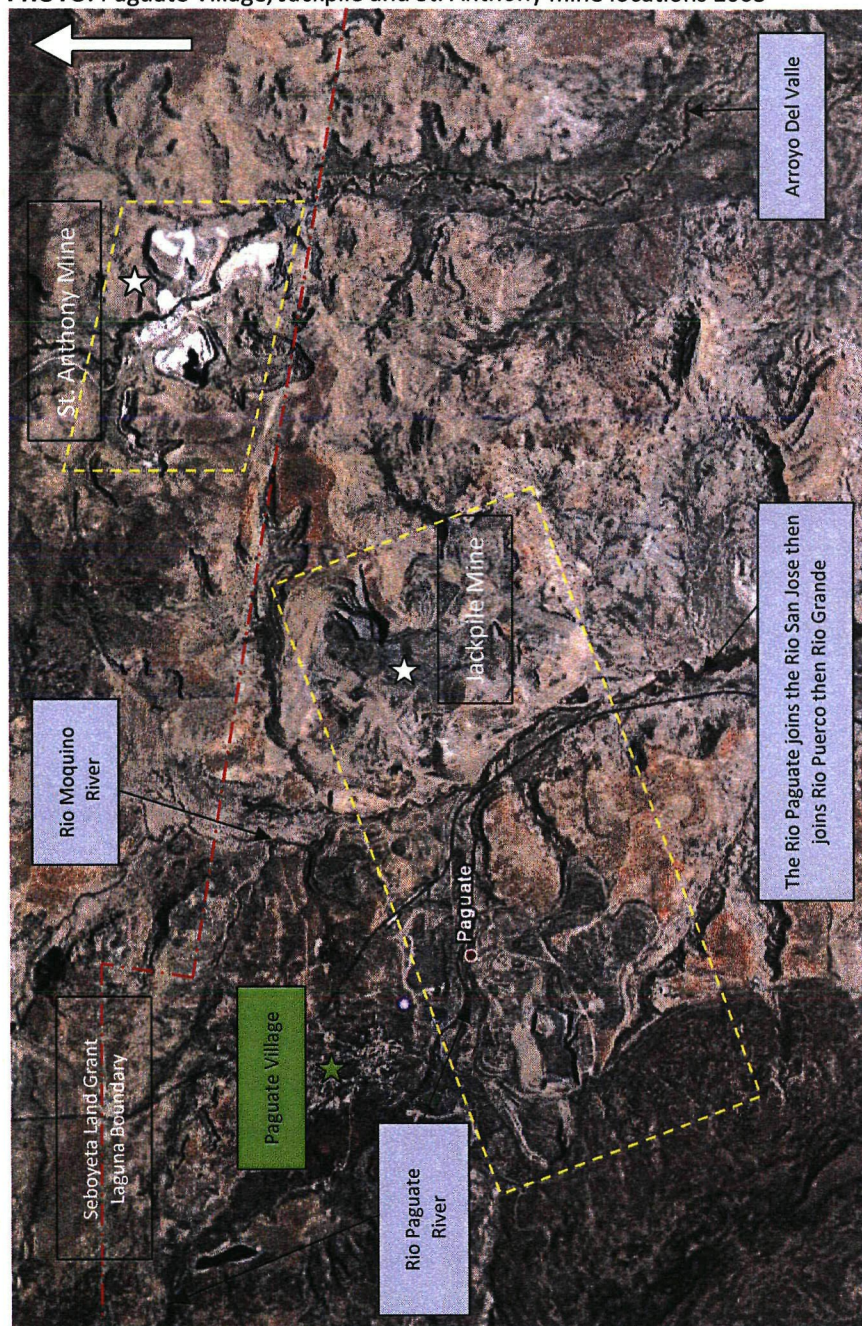
PHOTO: Jackpile Reclamation Project: Taken during reclamation May 1991



**TRADITIONAL CULTURAL PROPERTY – Permanent status for Mt Taylor Granted** Five tribes; Laguna, Acoma, Zuni, Hopi and the Navajo, have succeeded in obtaining Permanent Traditional Cultural Property status for Mt Taylor from the state of NM. This allows the tribes to have Public Notice and Public Comment with issues regarding Mt Taylor. Mt Taylor is the headwater source for all rivers affecting tribal lands surrounding the mountain. Mining, milling and other large scale operations have the potential for disrupting the main water resources in the area. Water is a valuable resource and Laguna plans to participate in Public Notice and Public Comment in regards to Mt Taylor.



**PHOTO:** Paguate Village, Jackpile and St. Anthony mine locations 2005



### **CURRENT STATUS – LOCAL MINING**

Laguna is one of the many land owners with deposits of uranium still on their lands. Laguna pueblo currently has no interest in any type of mining; insitu, surface or underground. Laguna is however concerned with keeping our People, Lands and Natural Resources protected. With the renewed interest in uranium mining Laguna is concerned with the long term effects on the land, water and with all stakeholders concerned if mining is to be reintroduced in the local area - especially mining operations upstream from our surface and ground water resources.

We have come a long way in reclamation and wish to show the great effort and resources it takes to recover from mining both monetary and environmentally.

**PHOTO:** Jackpile Mine during Reclamation 1993



### **Uranium Mines & Mills in the area**

	<b>Type</b>
Jackpile Mine – Reclaimed	Mine
St Anthony Mine – Unreclaimed	Mine
SOHIO – Reclaimed	Mill
Haystack – Reclaimed	Mine
Ambrosia Lake – Reclaimed/ Point source/ Superfund	Mine/Mill
Rio Algom – Reclaimed	Mill
Homestake Mine – Reclaimed/ New lease/Superfund	Mine/Mill
Bluewater – Reclaimed	Mill
Churchrock/Crownpoint- Reclaimed	Mill



Photos after Reclamation



South Paguate Pit - SP-OP-34

Photos after Reclamation



Jackpile Pit - JP-OP-41



South Paguate Pit - SP-OP-35



North Paguate Pit - NP-OP-20